

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method of forming a pixel cell of an imaging device, said method comprising the steps of:

forming a photosensitive device in said pixel cell; and

forming at least one transistor in said pixel cell to have a gate and source/drain regions on opposite sides of said gate, at least one of said source/drain regions having no halo implant[.].

wherein at least one of said source/drain regions have no lightly doped drain implant.

2. (Original) The method of claim 1, wherein said source/drain regions on either side of said gate have no halo implant.

3. (Canceled)

4. (Original) The method of claim 1, wherein at least one of said source/drain regions have no enhancement implant.

5. (Original) The method of claim 4, wherein both of said source/drain regions have no enhancement implant.

6. (Original) The method of claim 1, wherein at least one of said source/drain regions consists essentially of a source/drain implant and a lightly doped drain implant.

7. (Original) The method of claim 1, wherein said transistor is one of a source follower transistor, a row select transistor, a reset transistor, a dual conversion gain transistor, a high dynamic range transistor, a transfer transistor and a global shutter transistor.

8. (Original) The method of claim 1, wherein said pixel cell is one of a 3T, 4T, 5T, 6T and 7T pixel cell.

9. (Original) The method of claim 1, wherein said transistor has a threshold voltage lower than the threshold voltage of another transistor of said pixel cell.

10. (Original) The method of claim 9, wherein said threshold voltage of said transistor is in the range of about 0.3 V to about less than 0.7 V.

11. (Original) The method of claim 10, wherein said threshold voltage of said transistor is about 0.4 V to about 0.65 V.

12. (Original) The method of claim 9, wherein said another transistor is one of a source follower transistor, a row select transistor, a reset transistor, a dual conversion gain transistor, a high dynamic range transistor, a transfer gate transistor and a global shutter transistor.

13. (Original) The method of claim 1, wherein said photosensitive device is one of a photodiode, a photoconductor and a photogate.

14. (Original) The method of claim 1, wherein said imaging device is a CMOS imager.

15. (Original) The method of claim 1, wherein said imaging device is a CCD imager.

16. (Currently Amended) A method of forming a pixel cell of an imaging device, said method comprising the steps of:

forming a photosensitive device in said pixel cell; and
forming at least one transistor in said pixel cell to have a gate receiving charge from said photosensitive device and source/drain regions on opposite

sides of said gate, at least one of said source/drain regions having no enhancement implant[.].

wherein at least one of said source/drain regions have no lightly doped drain implant.

17. (Original) The method of claim 16, wherein both of said source/drain regions have no enhancement implant.

18. (Original) The method of claim 16, wherein at least one of said source/drain regions have no halo implant.

19. (Canceled)

20. (Original) The method of claim 16, wherein said transistor is one of a source follower transistor, a row select transistor, a reset transistor, a dual conversion gain transistor, a high dynamic range transistor, a transfer gate transistor and a global shutter transistor.

21. (Original) The method of claim 16, wherein said pixel cell is one of a 3T, 4T, 5T, 6T and 7T pixel cell.

22. (Original) The method of claim 16, wherein said transistor has a threshold voltage lower than the threshold voltage of another transistor of said pixel cell.

23. (Original) The method of claim 22, wherein said threshold voltage of said transistor is in the range of about 0.3 V to about less than 0.7 V.

24. (Original) The method of claim 23, wherein said threshold voltage of said transistor is about 0.4 V to about 0.65 V.

25. (Original) The method of claim 22, wherein said another transistor is one of a source follower transistor, a row select transistor, a reset transistor, a dual conversion gain transistor, a high dynamic range transistor, a transfer gate transistor and a global shutter transistor.

26. (Original) The method of claim 16, wherein said photosensitive device is one of a photodiode, a photoconductor and a photogate.

27. (Original) The method of claim 16, wherein said imaging device is one of a CMOS imager or a CCD imager.

28. (Original) A method of forming a pixel cell of an imaging device, said method comprising the steps of:

forming a photosensitive device in said pixel cell; and
forming at least one transistor in said pixel cell to have a gate receiving charge from said photosensitive device and source/drain regions on opposite sides of said gate, at least one of said source/drain regions having no lightly doped drain implant.

29. (Original) The method of claim 28, wherein said source/drain regions on either side of said gate have no lightly doped drain implant.

30. (Original) The method of claim 28, wherein at least one of said source/drain regions have no halo implant.

31. (Original) The method of claim 28, wherein at least one of said source/drain regions consists essentially of a source/drain implant and a lightly doped drain implant.

32. (Original) The method of claim 28, wherein said transistor is one of a source follower transistor, a row select transistor, a reset transistor, a dual conversion gain

transistor, a high dynamic range transistor, a transfer transistor and a global shutter transistor.

33. (Original) The method of claim 28, wherein said pixel cell is one of a 3T, 4T, 5T, 6T or 7T pixel cell.

34. (Original) The method of claim 28, wherein said transistor has a threshold voltage lower than the threshold voltage of another transistor of said pixel cell.

35. (Original) The method of claim 34, wherein said threshold voltage of said transistor is in the range of about 0.3 V to about less than 0.7 V.

36. (Original) The method of claim 35, wherein said threshold voltage of said transistor is about 0.4 V to about 0.65 V.

37. (Original) The method of claim 34, wherein said another transistor is one of a source follower transistor, a row select transistor, a reset transistor, a dual conversion gain transistor, a high dynamic range transistor, a transfer gate transistor and a global shutter transistor.

38. (Original) The method of claim 28, wherein said photosensitive device is one of a photodiode, a photoconductor and a photogate.

39. (Original) The method of claim 28, wherein said imaging device is one of a CMOS imager or a CCD imager.

40. (Currently Amended) A method of forming a pixel cell of an imaging device, said method comprising the steps of:

forming a photosensitive device in said pixel cell;

forming a first transistor in said pixel cell to have a first gate receiving charge from said photosensitive device and first source/drain regions on opposite sides of said first gate; and

forming a second transistor in said pixel cell to have a second gate for resetting a signal from said first transistor and second source/drain regions on opposite sides of said second gate, at least one of said second source/drain regions having no halo implant[.]

wherein at least one of said second source/drain regions have no lightly doped drain implant.

41. (Original) The method of claim 40, wherein said second source/drain regions on either side of said second gate have no halo implant.

42. (Canceled)

43. (Original) The method of claim 40, wherein at least one of said second source/drain regions have no enhancement implant.

44. (Original) The method of claim 40, wherein said pixel cell is one of a 3T, 4T, 5T, 6T and 7T pixel cell.

45. (Original) The method of claim 40, wherein said second transistor has a threshold voltage lower than the threshold voltage of said first transistor of said pixel cell.

46. (Original) The method of claim 44, wherein said threshold voltage of said second transistor is in the range of about 0.3 V to about less than 0.7 V.

47. (Original) The method of claim 40, wherein said first transistor and said second transistor are independently selected from the group consisting of a source

follower transistor, a row select transistor, a reset transistor, a dual conversion gain transistor, a high dynamic range transistor, a transfer gate transistor and a global shutter transistor.

48. (Original) The method of claim 40, wherein said photosensitive device is one of a photodiode, a photoconductor and a photogate.

49. (Original) The method of claim 40, wherein said imaging device is one of a CMOS imager or a CCD imager.

50-143. (Canceled)